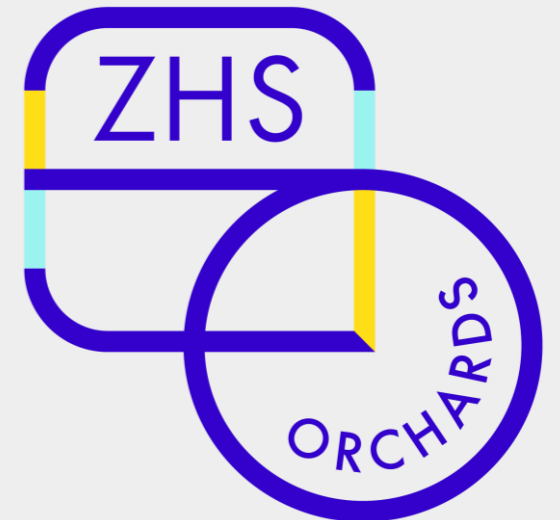


Digital Analytics Lunchtime Webinars

12th Nov – My Way: Techniques & Approaches for Data Analysis

G'day I'm Peter

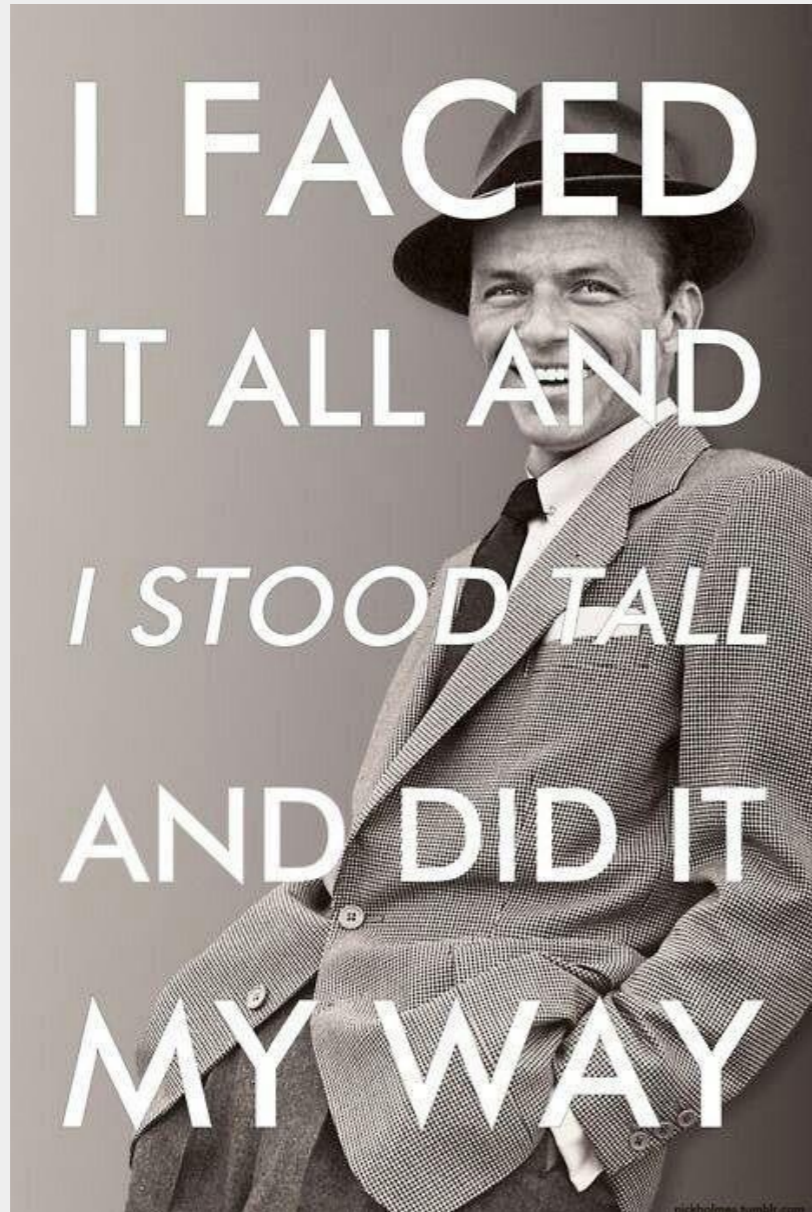
- Australian
- Lived in London for 16 years
- Now making a home in the Netherlands
- Worked in Digital Analytics since 2006
- Launched own agency in 2010, merged in 2016, sold in 2018, exited last year
- Founder of MeasureCamp
- Back freelancing as a Data Strategy Director



Lunchtime Webinars

- Different approach to sharing my ideas
 - Not everyone reads blog posts
 - My ideas don't translate well to a formal course
- 45 min lunchtime sessions
 - Allow people to follow along in their lunchbreak
 - Keeping to the MeasureCamp style with plenty of opportunity for discussion
- Purpose of sessions
 - To share my knowledge with others
 - Best way to challenge/develop ideas, make them public
 - Lead generation

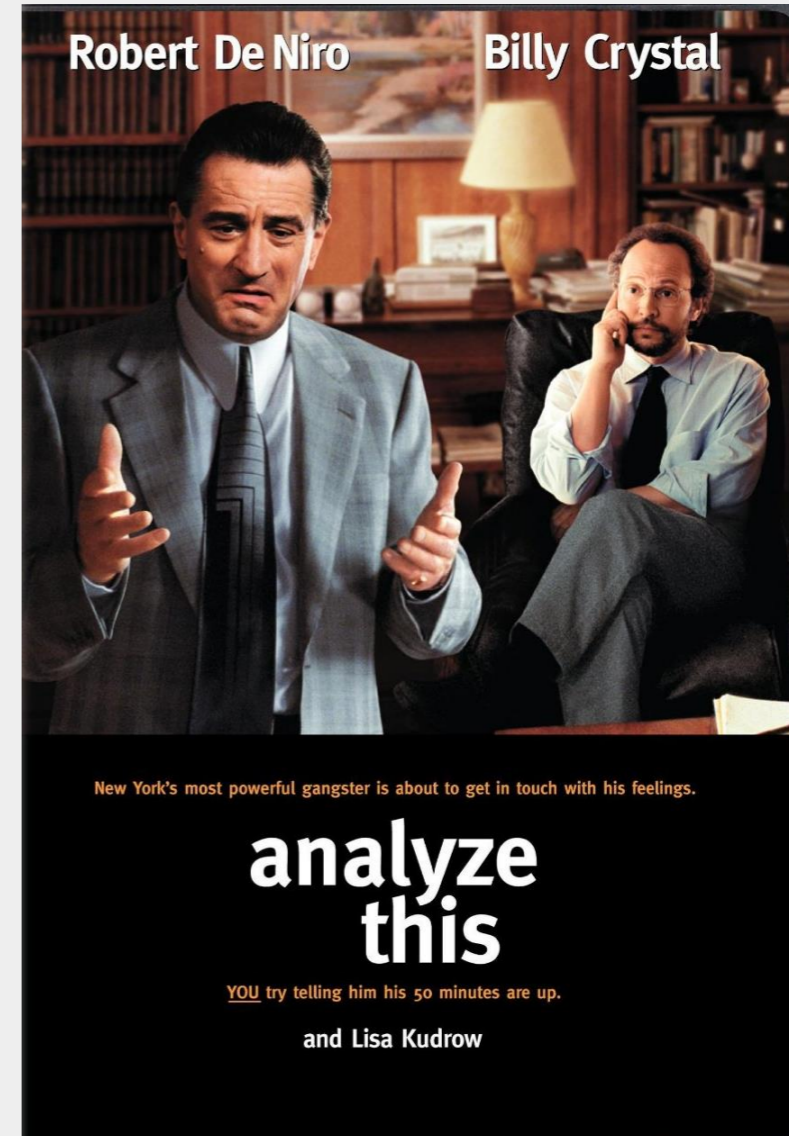
Today's Talk



- No, there is no singing
- This was my 2016 Superweek talk
- It was intended as a practical talk compared to my talks on maturity, etc
- It is not intended for experienced analysts

Define the Scenario for today's talk

- Analyse our website performance
 - Or marketing campaign or website section
- Output: Set of recommendations to improve performance



Theme behind all Analysis that I do

- I look for the exceptions, the numbers that look wrong, the biggest changes in performance
- When I find a difference, I try and isolate it
- I want to identify the cause in the real world
- With the insight, I can make a recommendation so the organisation can achieve the good performance again or can fix the issue

Step 1 – Traffic Levels

- My starting point is always to look at website traffic
- So...

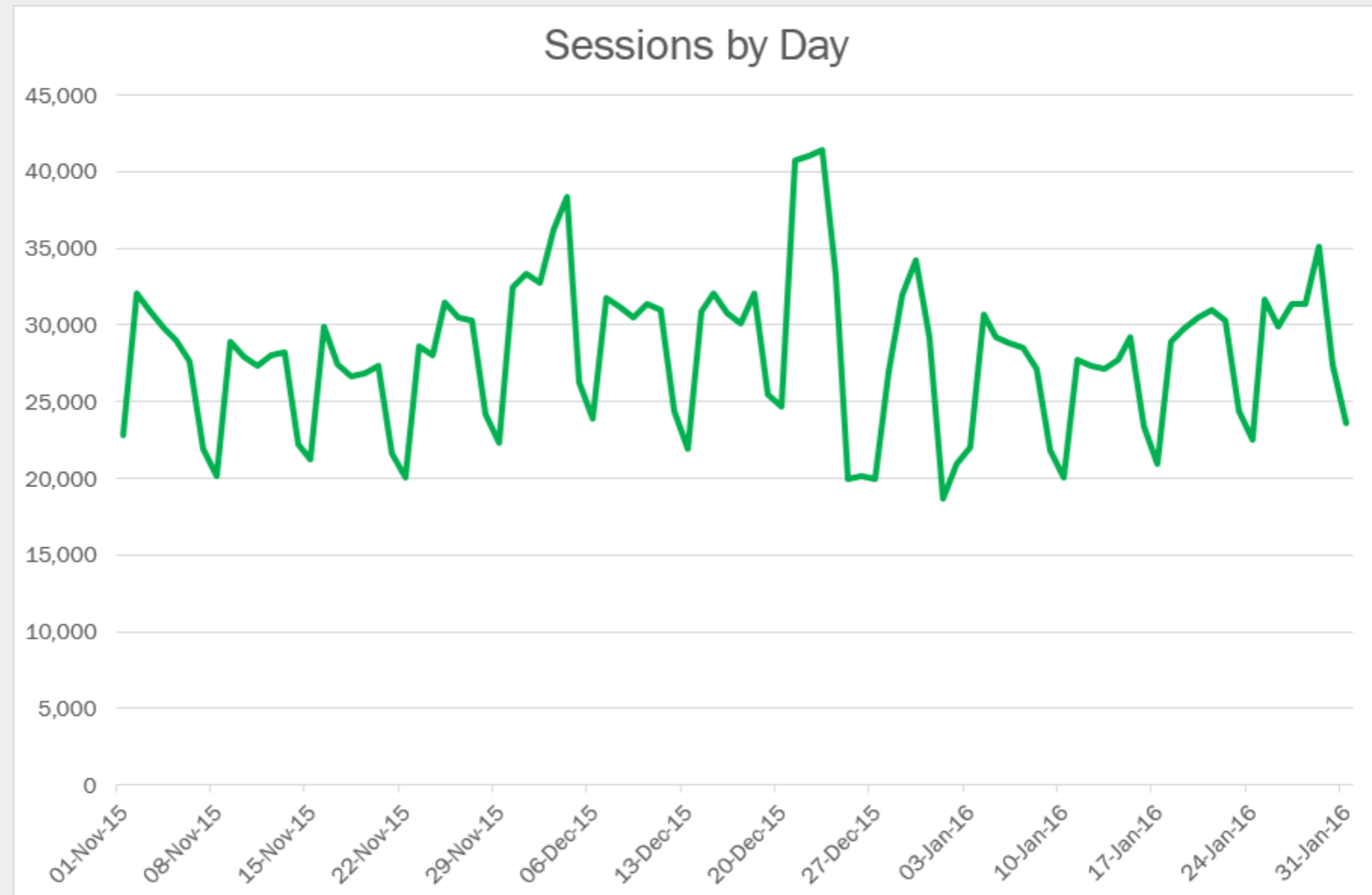
118,376

- OK, a bit meaningless

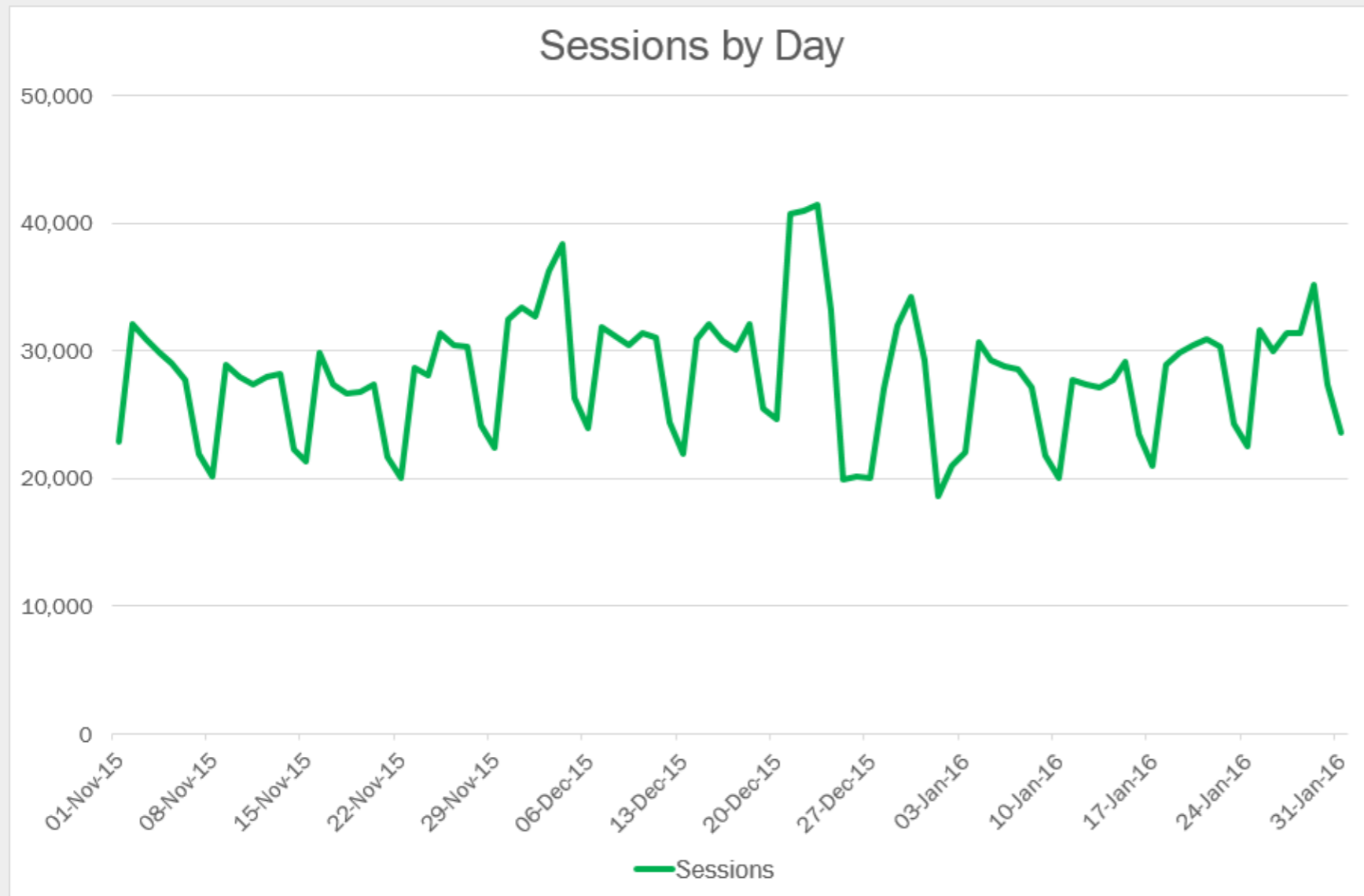
Trend the Traffic over Time

Date	Sessions
01-Nov-15	22,848
02-Nov-15	32,067
03-Nov-15	30,888
04-Nov-15	29,795
05-Nov-15	29,045
06-Nov-15	27,674
07-Nov-15	21,958
08-Nov-15	20,121
09-Nov-15	28,868
10-Nov-15	27,919
11-Nov-15	27,338
12-Nov-15	27,994
13-Nov-15	28,247
14-Nov-15	22,256
15-Nov-15	21,284
16-Nov-15	29,864
17-Nov-15	27,392
18-Nov-15	26,639
19-Nov-15	26,814
20-Nov-15	27,366
21-Nov-15	21,640
22-Nov-15	20,059
23-Nov-15	28,639
24-Nov-15	28,068
25-Nov-15	31,428
26-Nov-15	30,478
27-Nov-15	30,281
28-Nov-15	24,177

The raw data is not very useful – so visualise it

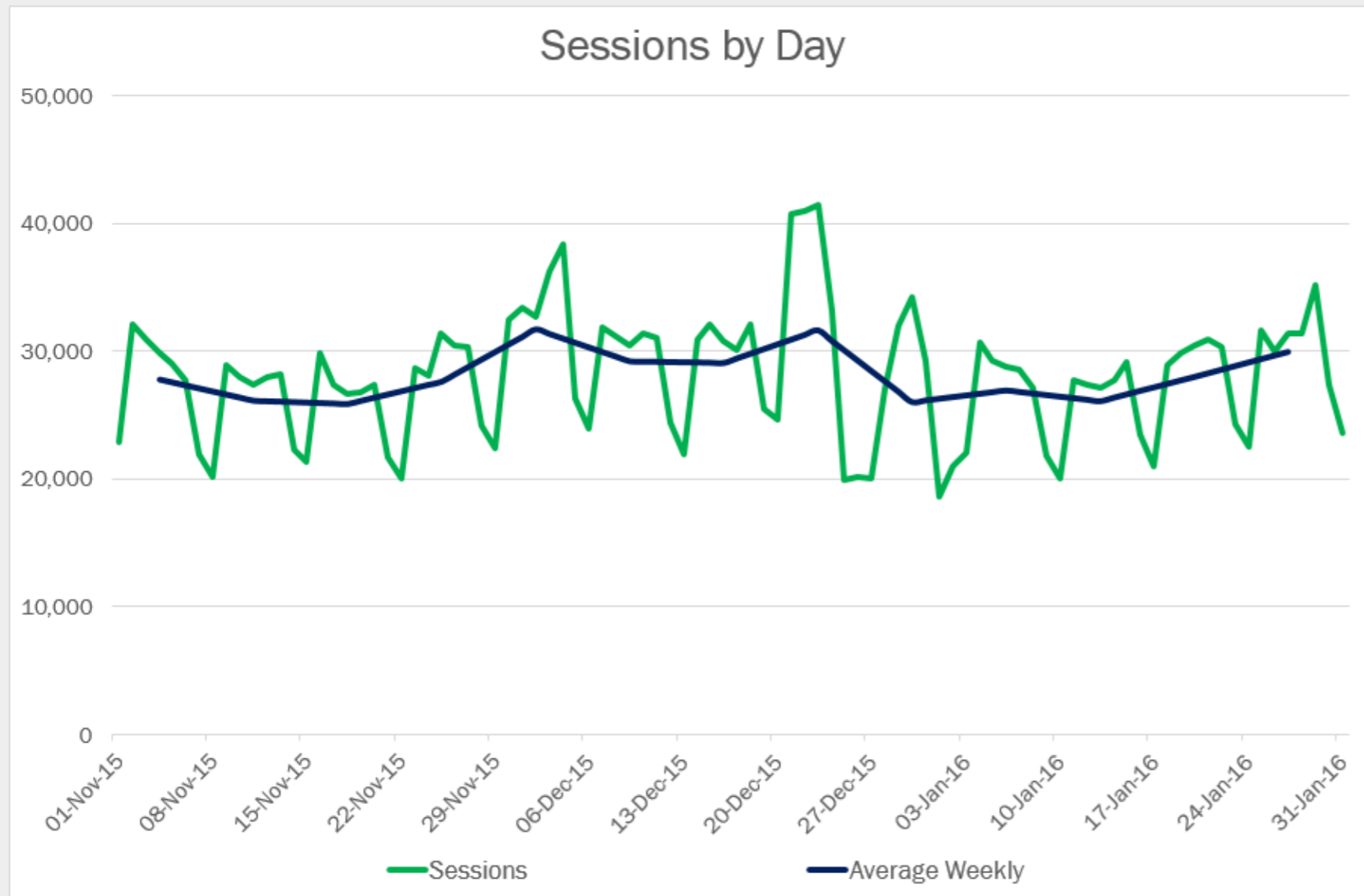


Digression #1 – How to make Daily Data Useful



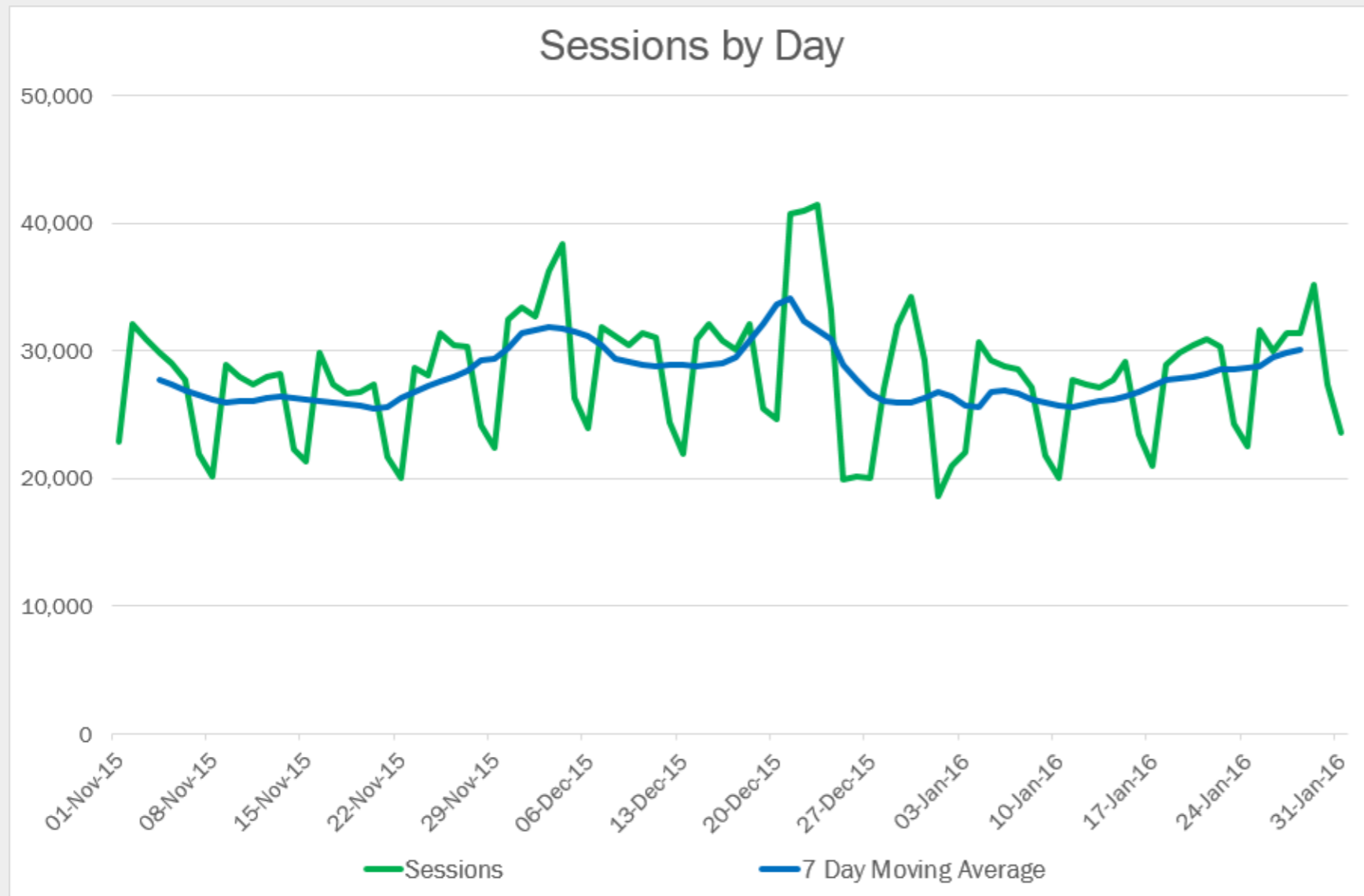
- It is useful to view data by day
- But it is difficult to identify good days, bad days and normal days
- Even difficult to understand the overall trend

Digression #1 – How to make Daily Data Useful



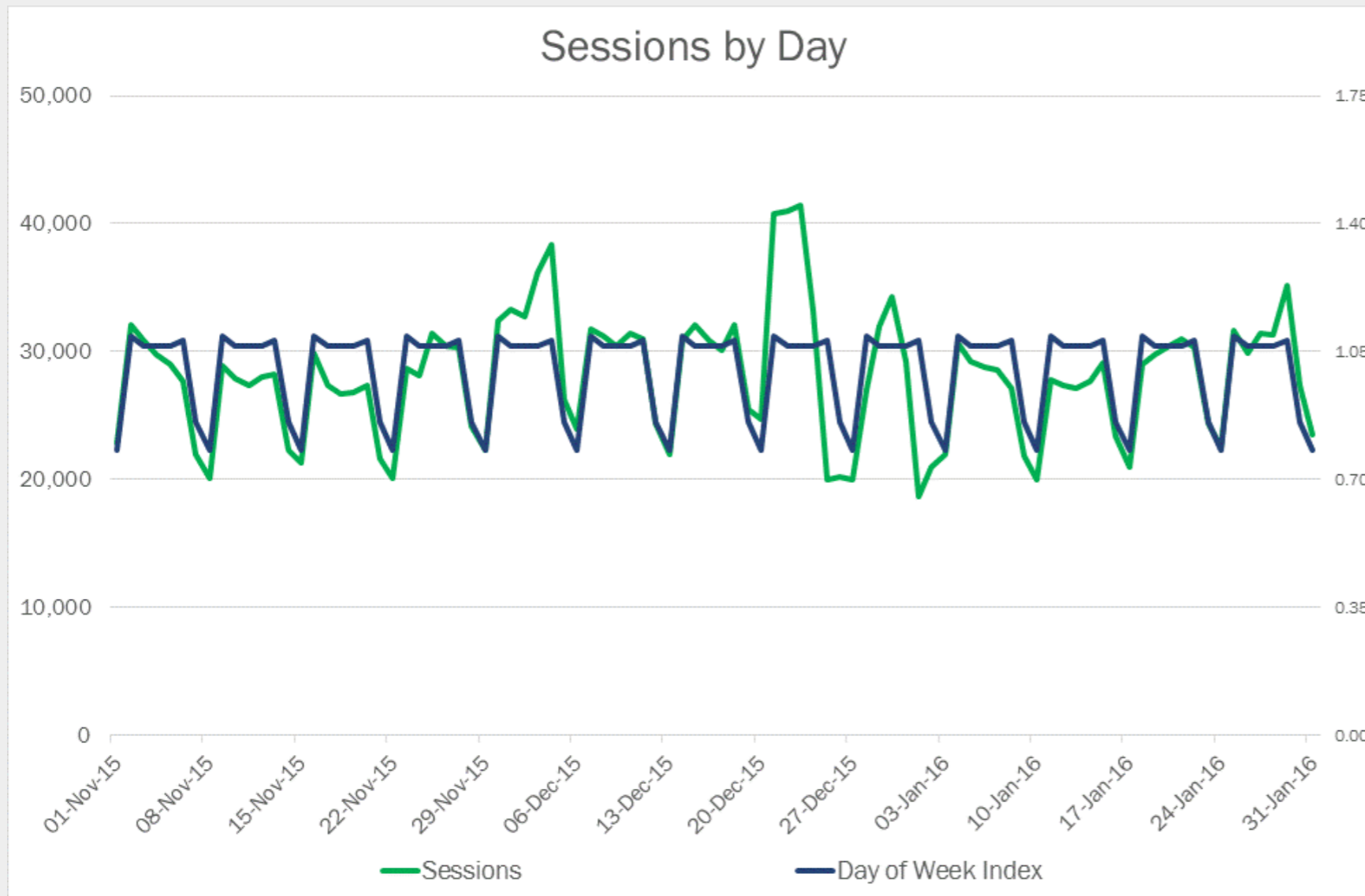
- The first and obvious action is to sum the sessions by week
- It removes the peaks and troughs, I can see the trend over time
- But groups the days in an artificial way
- *Note I have cheated a bit to get this line to appear*

Digression #1 – How to make Daily Data Useful



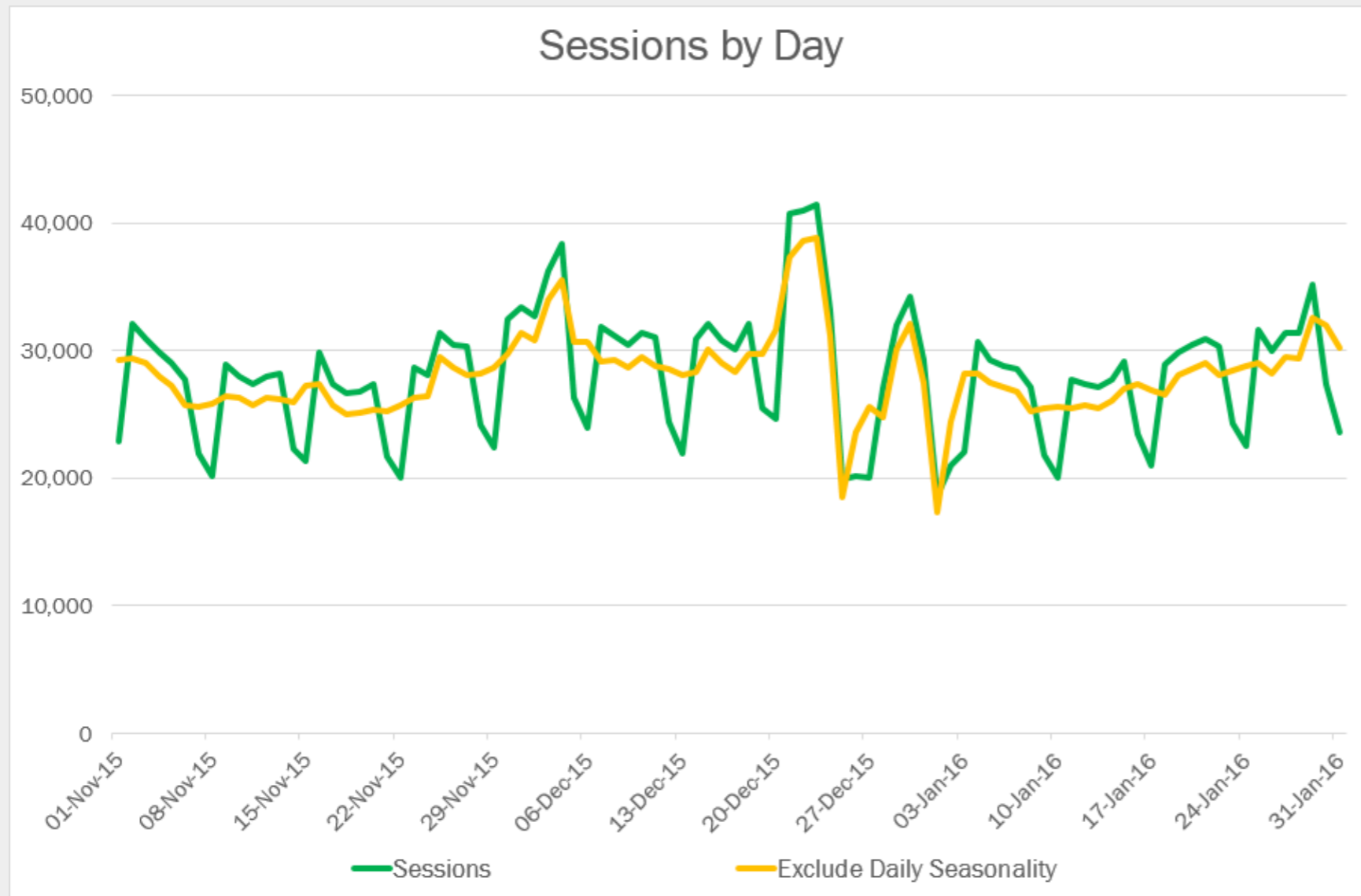
- Better is to use a 7 day moving average
- This treats every day separately, grouping days either side of it
- You can see more of a daily trend up and down
- Still difficult to definitely say a day is good or bad

Digression #1 – How to make Daily Data Useful



- This is my favourite, remove the daily seasonality
- Calculate typical indexing for each day of the week

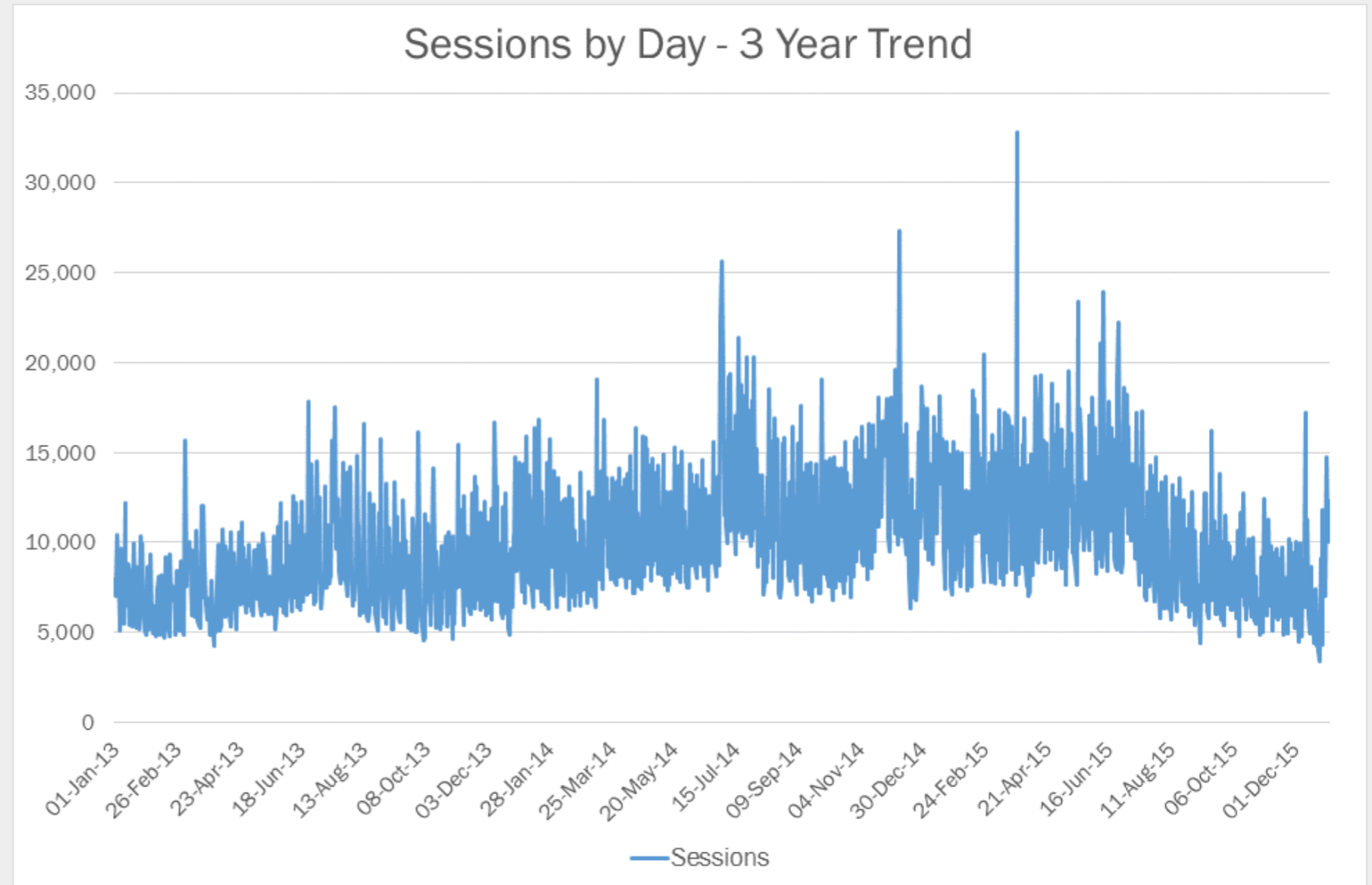
Digression #1 – How to make Daily Data Useful



- This is my favourite, remove the daily seasonality
- Calculate typical indexing for each day of the week
- Apply to data to get adjusted value per day
- Now get meaningful peaks and troughs

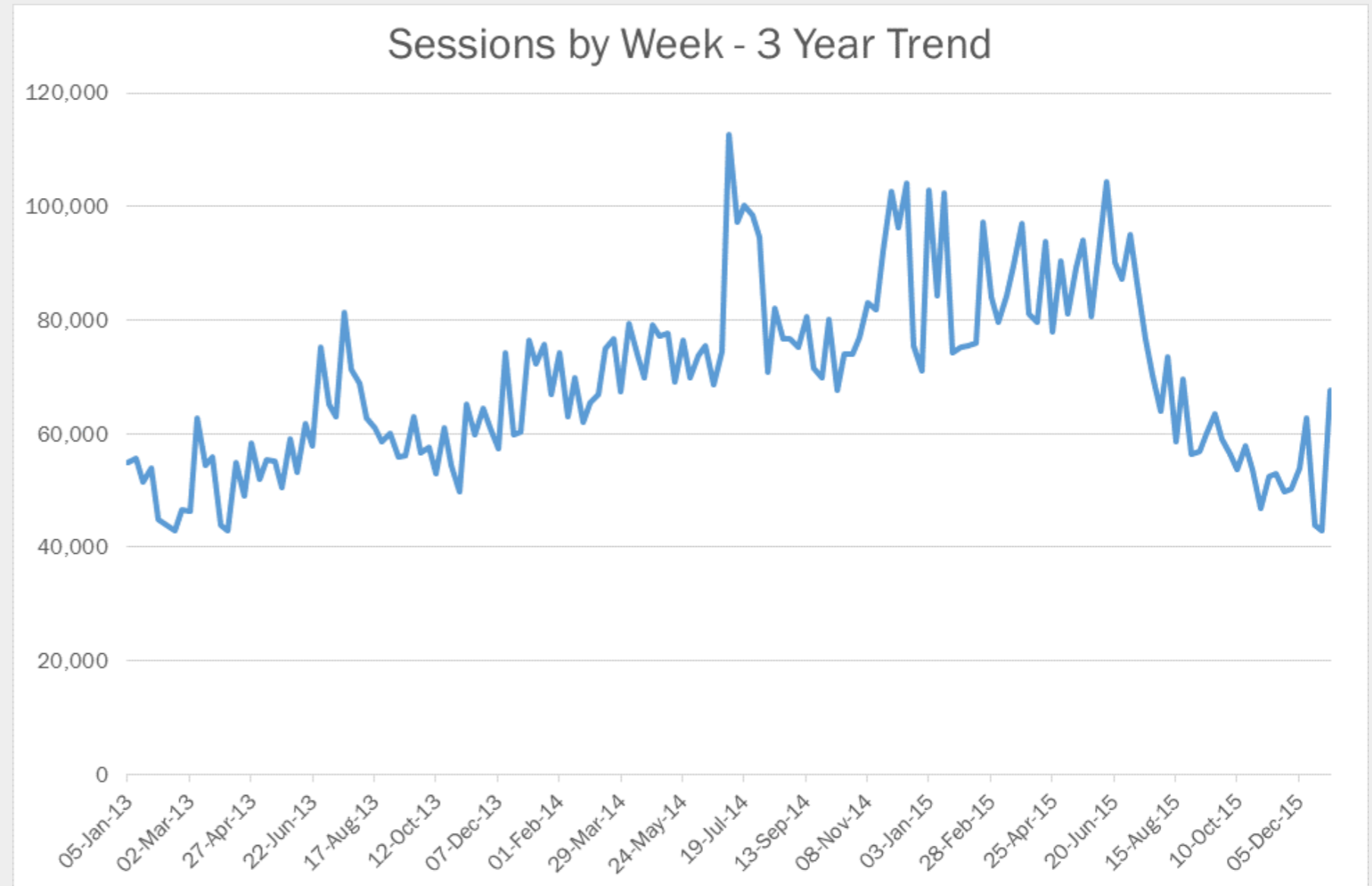
I want to review traffic over multiple years

- I am looking here for overall traffic trends
- But difficult to see at daily levels



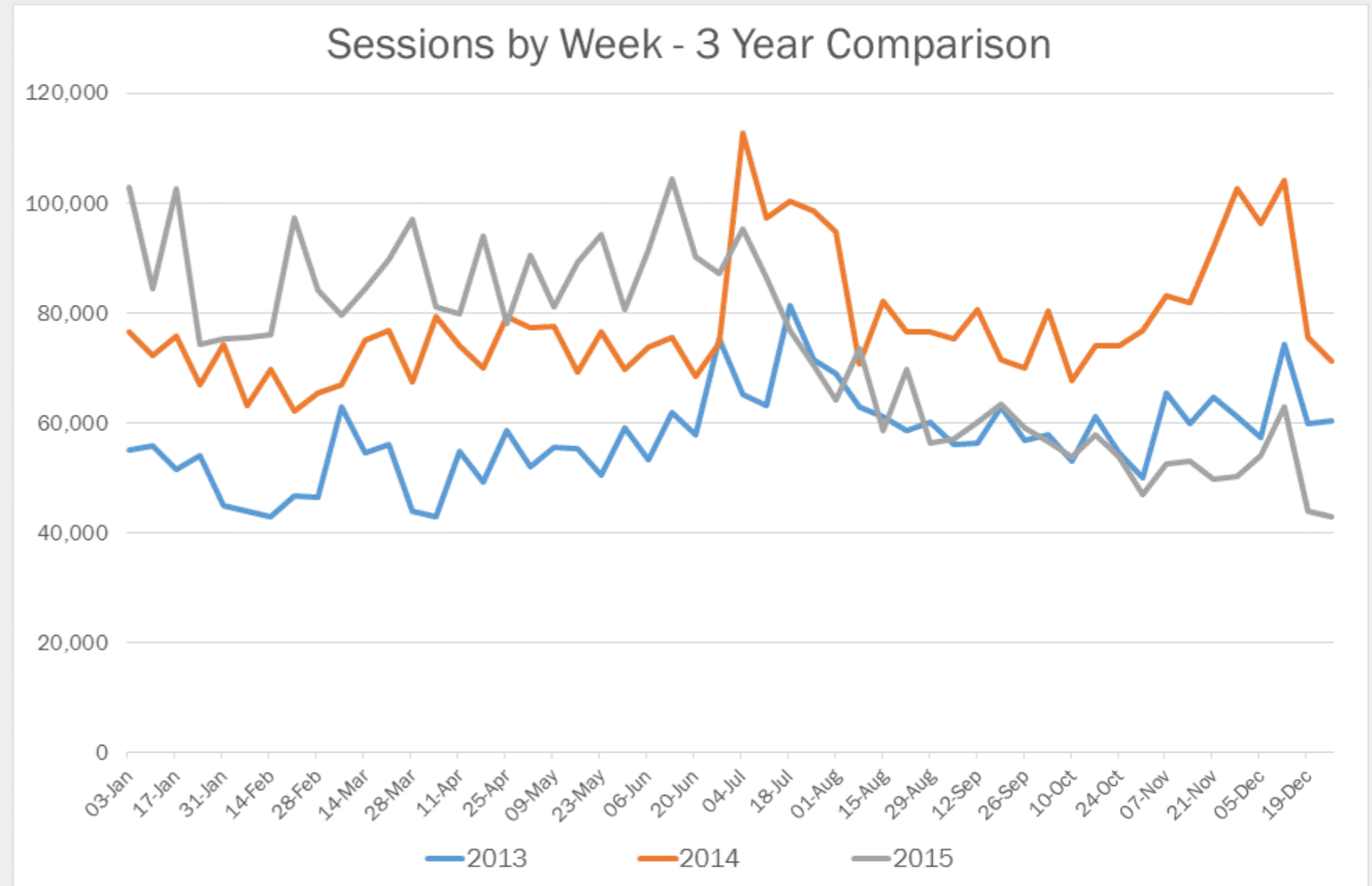
I want to review traffic over multiple years

- Viewing it by week makes it easier to see overall trend
- But still don't know what is normal/not normal



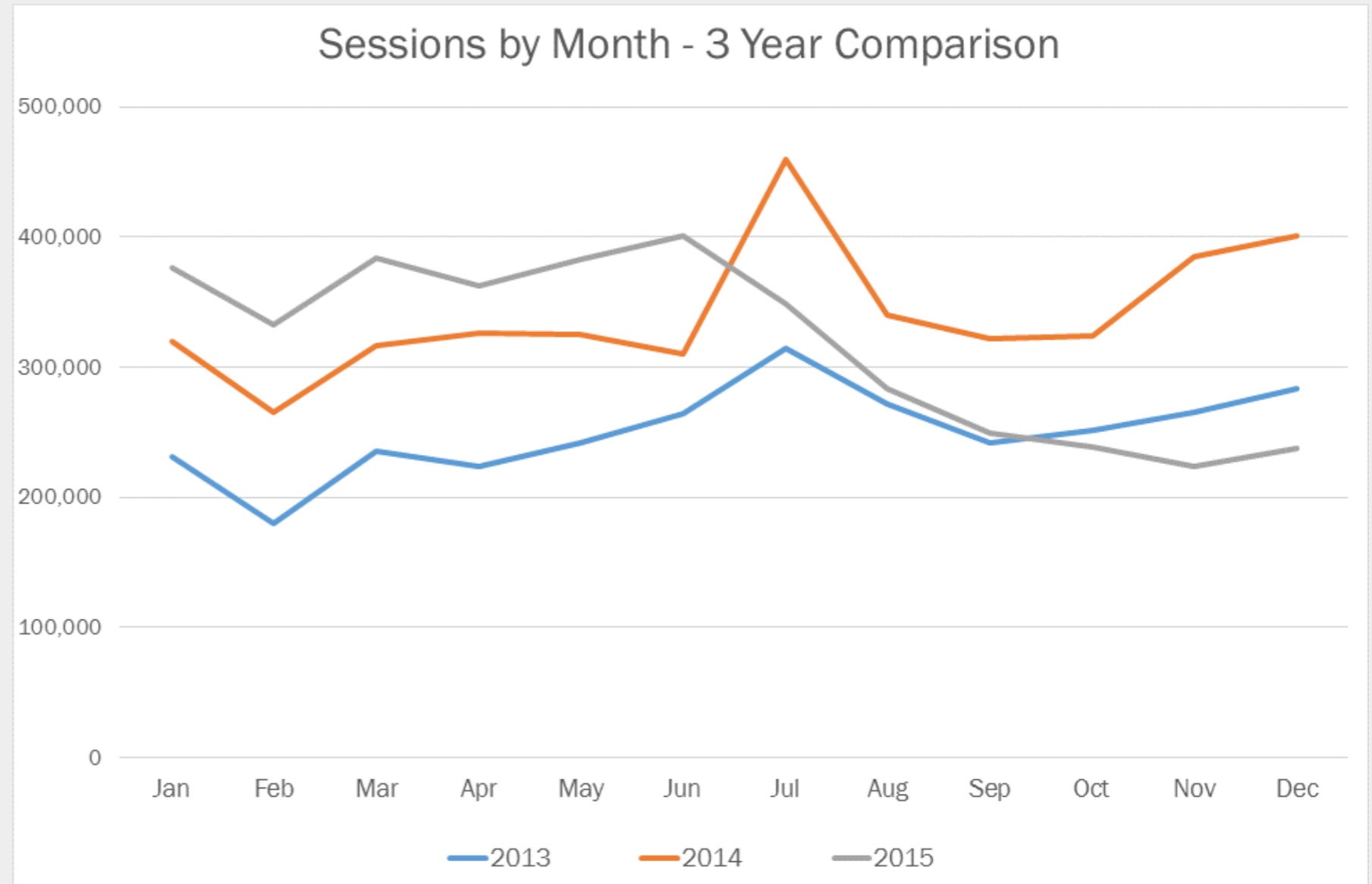
I want to review traffic over multiple years

- Changing the data to comparing across 3 years exposes issues
- Traffic was improving until mid 2015



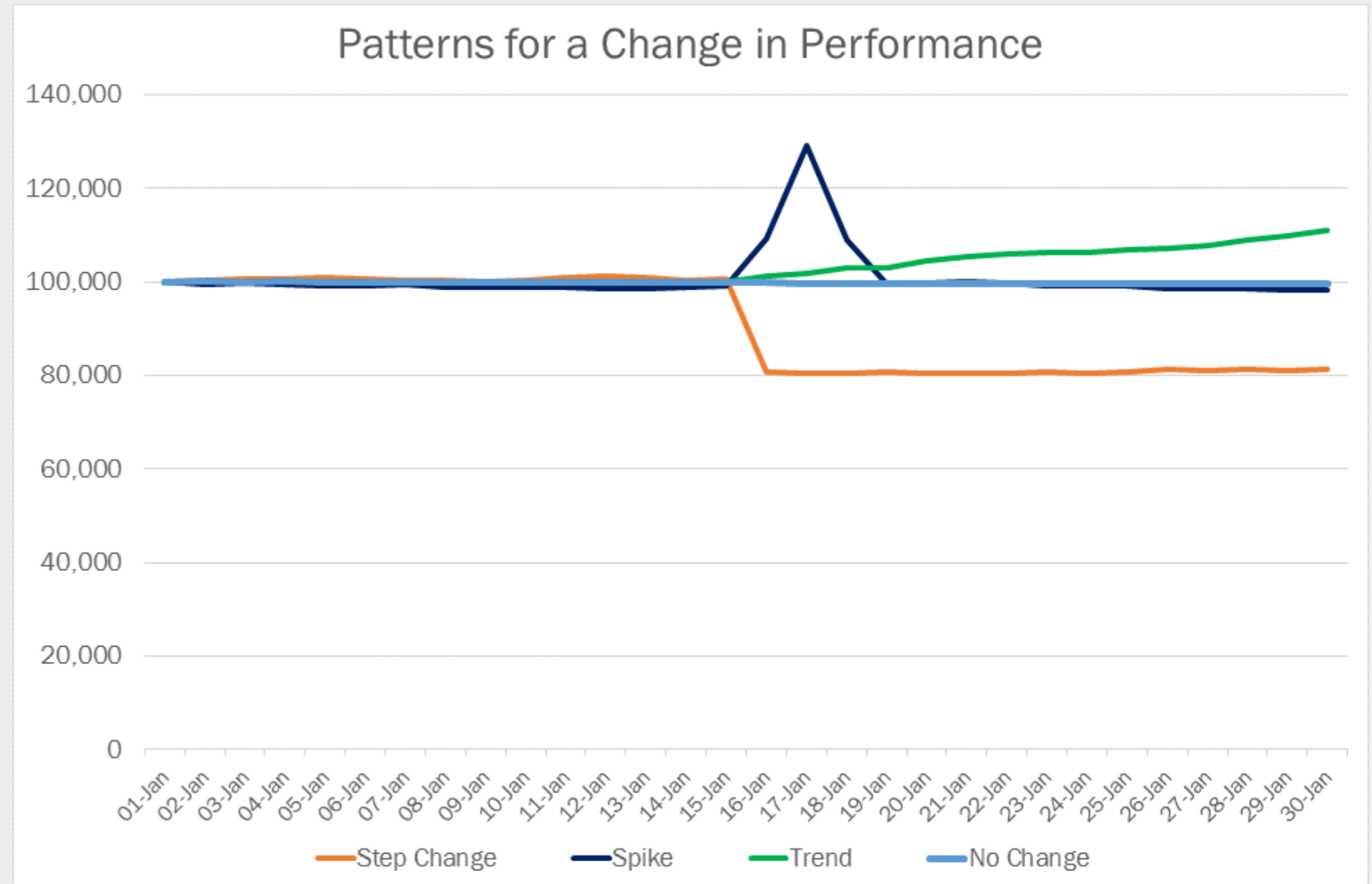
I want to review traffic over multiple years

- That overall trend is even clearer at monthly levels
- *Note that not all months are equal*
- Already though, I have two areas to investigate
- This should lead to two stories to tell

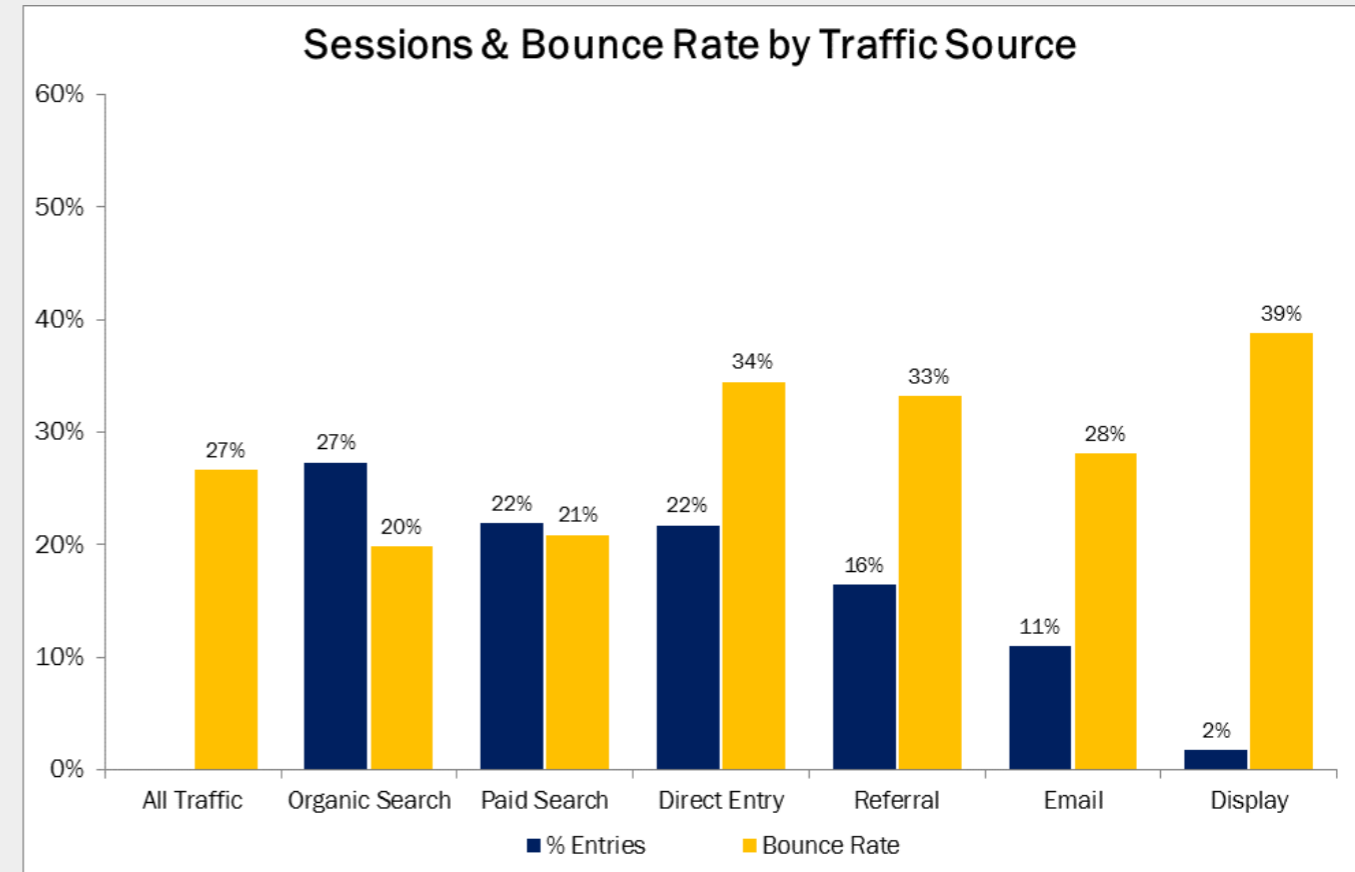
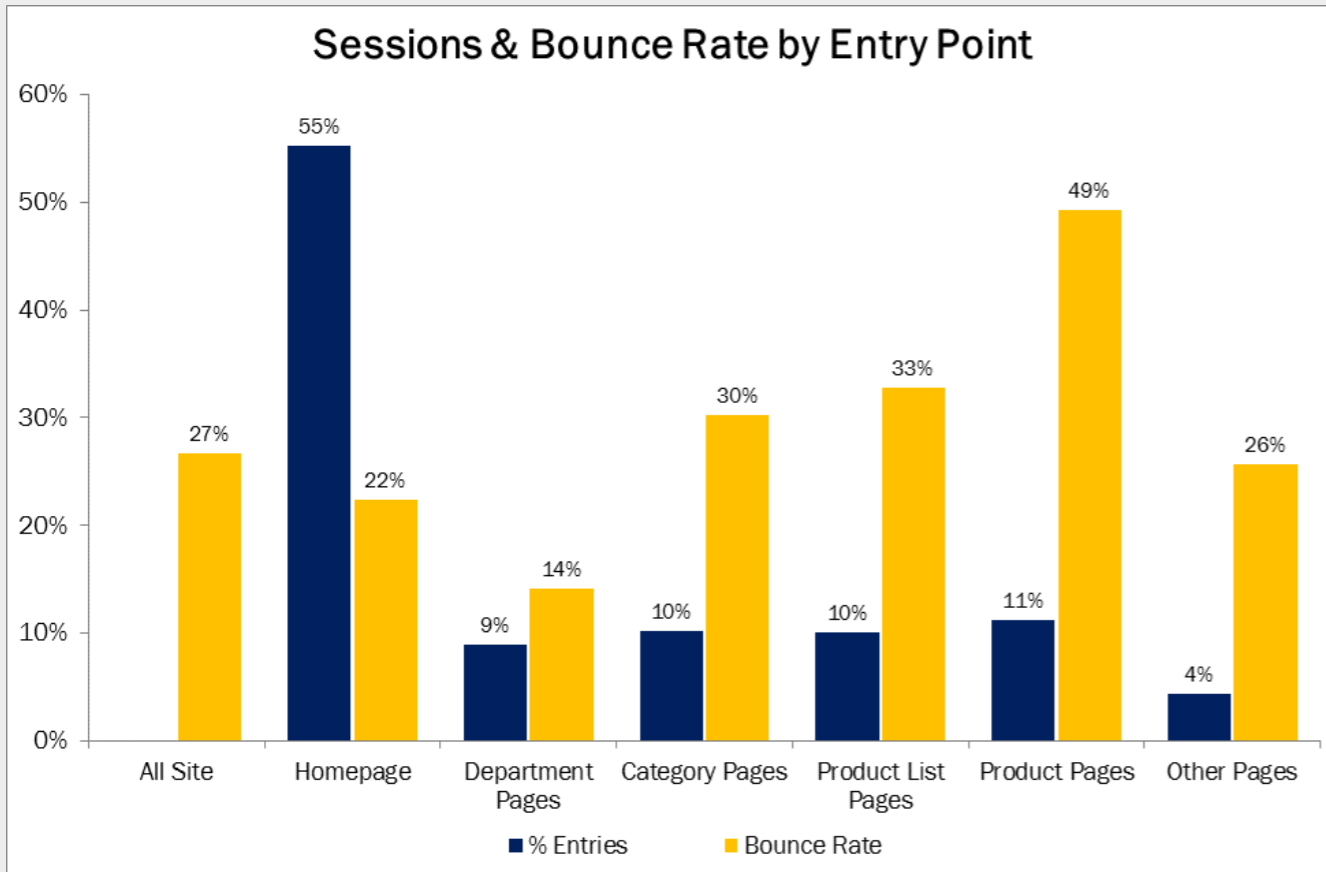


Digression #2 – Types of Change in Performance

- When performance changes, it is usually one of three patterns
 - Step Change
 - Spike
 - Trend
- Identifying the pattern can help identify the cause of the change = insight!



Next Step – Start Applying Key Segments



- The focus is still just traffic
- Choose a decent date range for traffic e.g. 4 to 8 weeks
- Can also break down by Device Category, Visitor Type, Location, etc

Digression #3 – The Importance of Grouping

Page Type	User Type	Visitor Type	Device Category	Browser	Traffic Source	Recency	Length
homepage	New Visitor	Prospect	Desktop	Firefox	Organic Search	New	Short
category	Returning Visitor	Registered	Tablet	Chrome	Paid Search	Recent	Medium
sub category		Single Purchase	Mobile	Internet Explorer	Direct Entry	Old	Long
search results		Multi Purchase		Safari	Referral	Ancient	Very Long
article					Email		
my account					Display		
company					Affiliates		

- Granular detail = too much data for most people
- So you group data so it can be understood (small data wins!!)
- We don't look at every single browser version, we group to browser
- You don't want words per page, you want to group to content length
- Apply this logic to all dimensions, start high level and then dig deeper

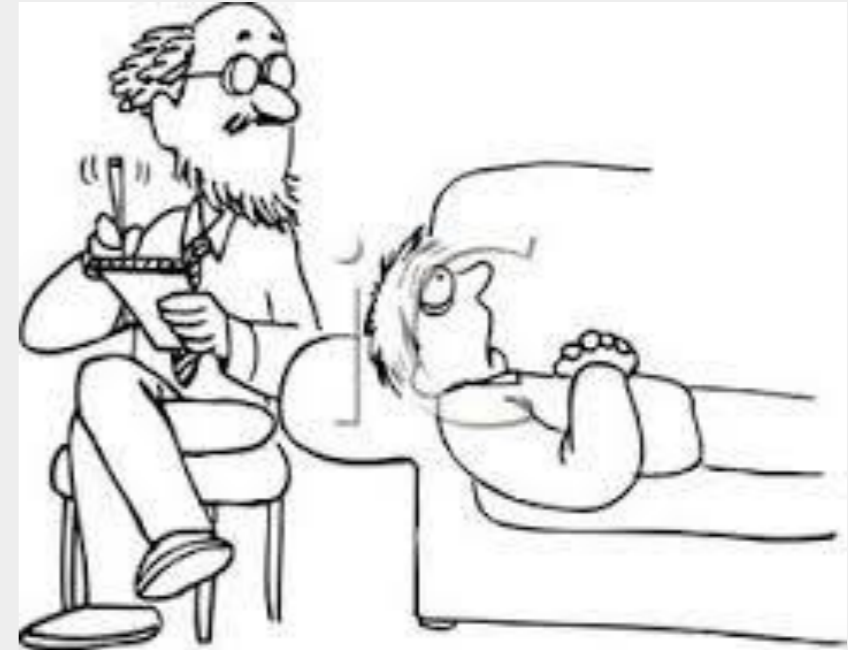
Review Performance by Segment with One Report

Metric Type	Metric Name	All Traffic	Visitor Type		Device Type			Visitor Location		Browser Performance for Desktop Device			
			New Visitors	Return Visits	Desktop	Tablet	Mobile	UK	Non UK	Firefox	Safari	Internet Explorer	Chrome
Traffic Metrics	Visits	100,000	65,000	35,000	52,000	10,000	38,000	80,000	20,000				
	% Visits		65%	35%	52%	10%	38%	80%	20%				
Key Conversion Stages	Website Conversion Rate	1.90%	0.90%	3.76%	2.00%	1.80%	0.65%	2.13%	1.00%				
	Ecommerce Conversion Rate	2.65%	1.17%	4.70%	3.80%	3.04%	0.34%	2.66%	1.43%				
	% Create Basket	7.5%	5.0%	12.1%	10.2%	10.0%	3.2%	8.3%	4.5%				
Ecommerce Funnel	% Ecommerce Visits	78%	77%	80%	79%	79%	77%	80%	70%				
	Ecommerce => Product	76%	76%	76%	77%	78%	74%	83%	45%				
	Product => Basket	13%	9%	20%	17%	16%	6%	12%	14%				
	Basket => Checkout	44%	40%	47%	49%	45%	21%	45%	33%				
	Checkout => Order	58%	45%	66%	60%	53%	40%	57%	67%				
Sales Metrics	Transactions	1,900	585	1,315	1,560	240	100	1,700	200				
	Revenue	£108,300	£31,590	£76,710	£90,480	£13,200	£4,620	£93,500	£14,800				
	Average Transaction Value	£57.00	£54.00	£58.33	£58.00	£55.00	£46.20	£55.00	£74.00				

- Rather than reviewing segment by segment, put it all in one place
- Break down performance by all key segments & for all key metrics
- Identify variations in performance to be investigated further

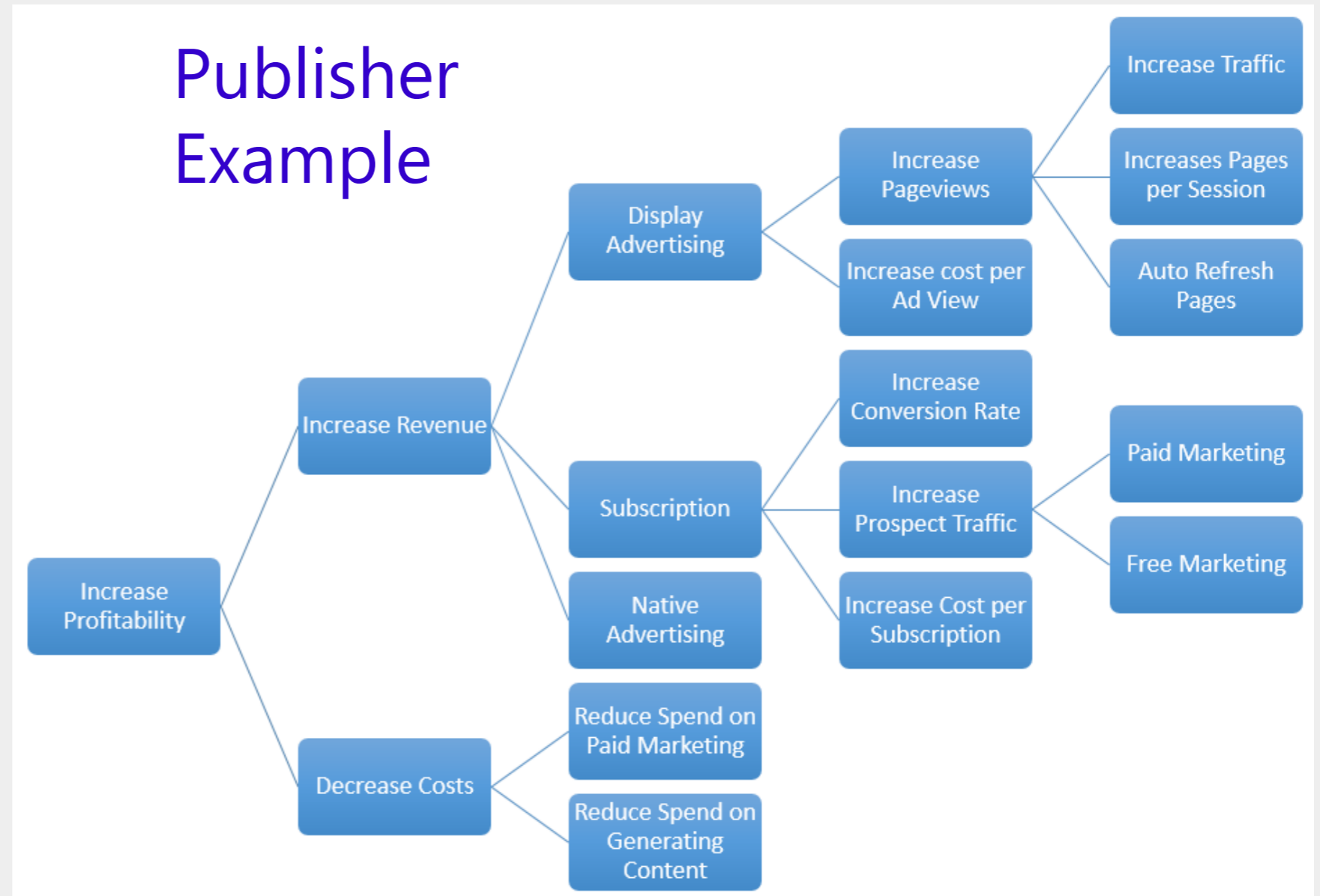
So... what critical step have I forgotten here???

- Oh yes, it helps to understand the business
 - You need to sit down and actually talk to people
- Ask questions so you can give sense to the data
 - How do you make money?
 - How is your website different/unique?
 - What are the key actions you want visitors to take?
 - How will different groups of people behave?
 - What actions have you taken that could impact performance?
 - And many more...
- So we can switch from talking Quantity to a focus on Quality



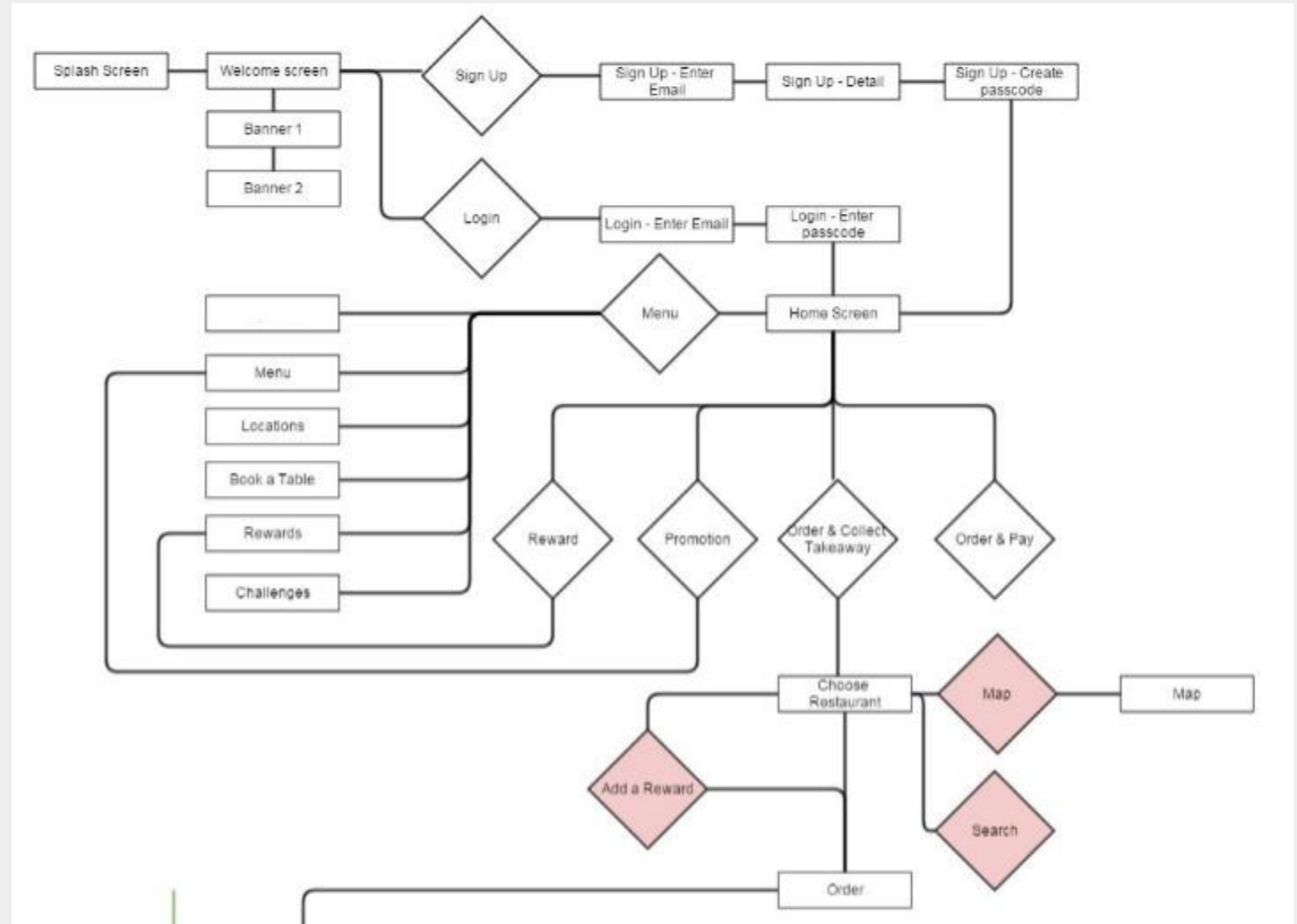
Digression #4 – Start drawing diagrams

- Map out how the company makes more money
- A complete mapping should provide a set of areas to focus on within your analysis



Digression #4 – Start drawing diagrams

- Map out the website/app
 - Not individual pages or screens but groupings
- Gives you insights into expected visitor flows
- Can define specific metrics to evaluate performance



Conversion Rates

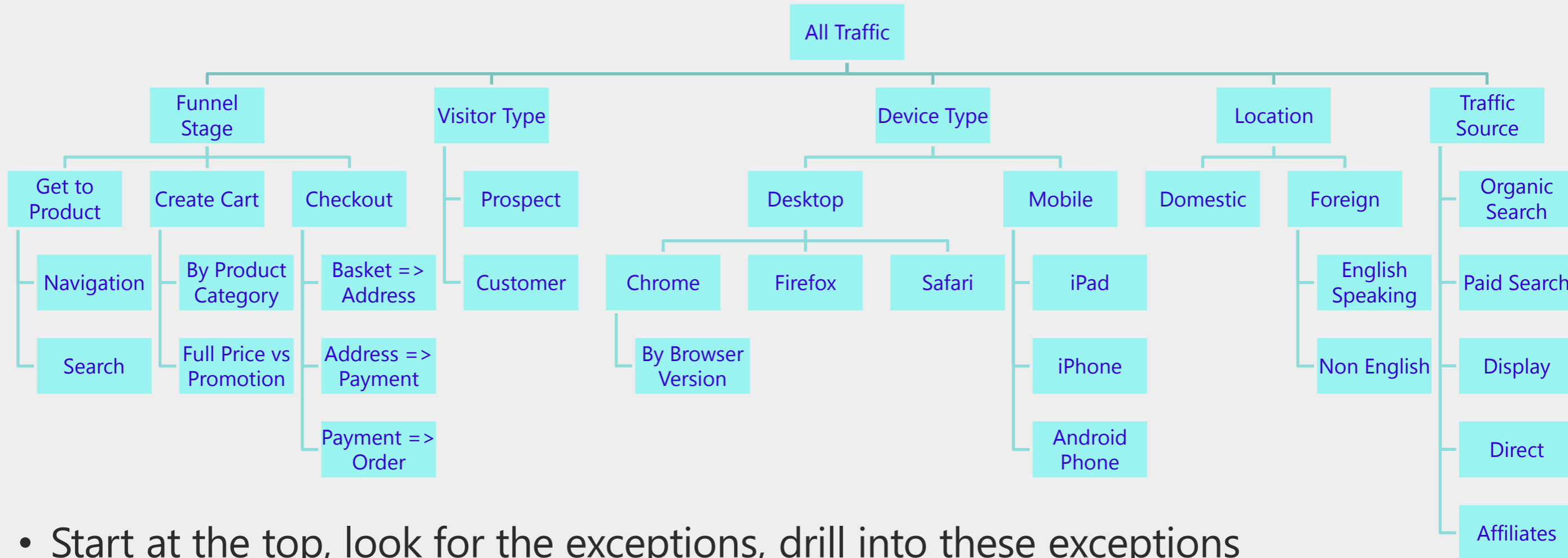
- At some point, you need to look at a Conversion Rate
 - However you define a conversion

- So...

2.73%

- Yep, still meaningless – so drill into the details

Top-down Approach to Analysis

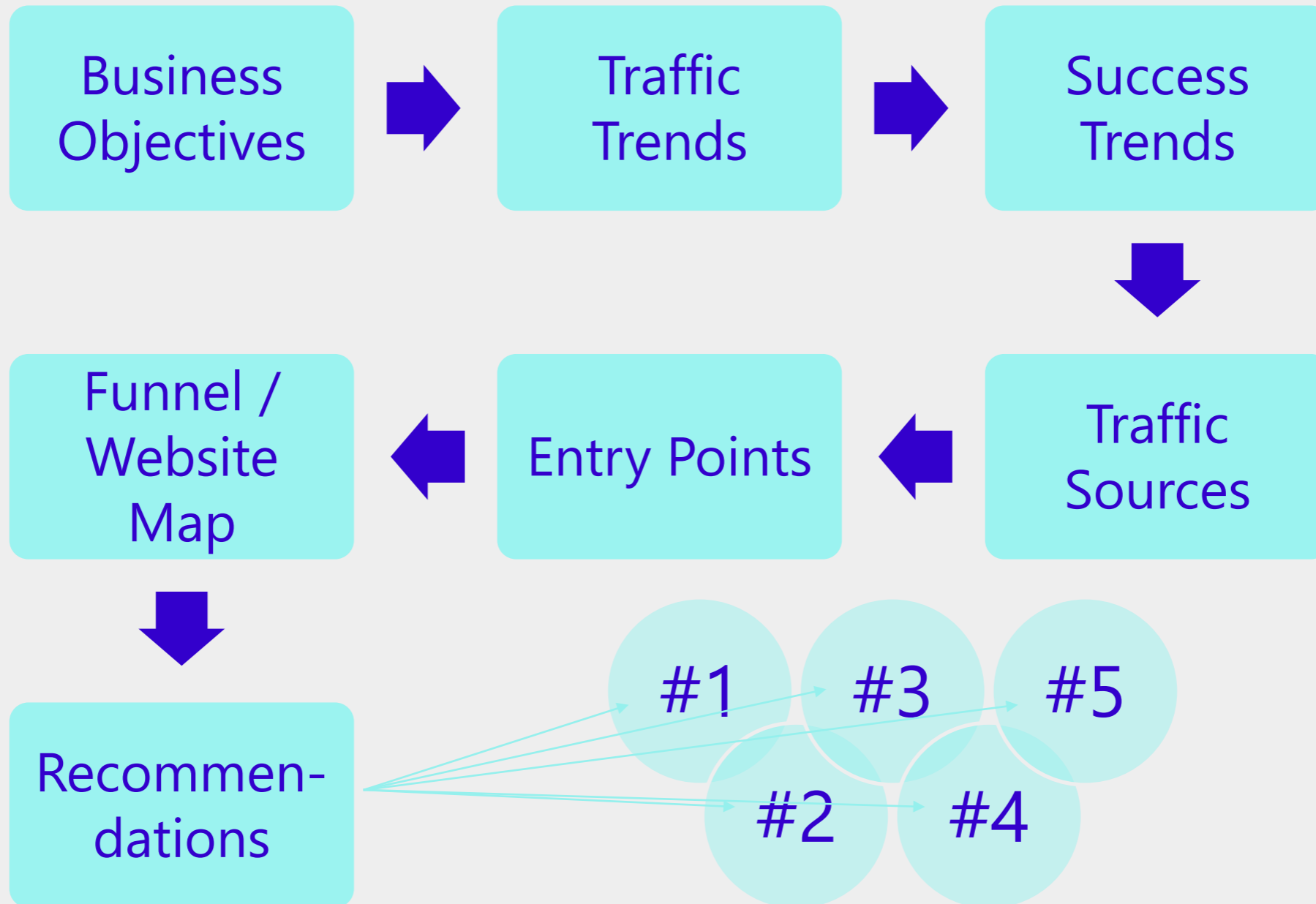


- Start at the top, look for the exceptions, drill into these exceptions
- If all options perform similarly, move to next segment to test against
- If subset of options perform differently, drill deeper on these values

Digression #5 – What is your data comparison?

- Last year – the same period (day, week, month) last year
- Previous period – the most recent period, can be any of previous day, same day last week, previous week, previous month, previous 3 weeks
- Alternative period – choose a period of equal length where performance was different
- External benchmarks – if can get hands on, how are your competitors performing (GA & AA offer anonymous benchmarks)
- Internal benchmarks – performance of a similar segment
- Targets – what your company would like to achieve
- Forecasts – predicted behaviour that ideally takes into account seasonality, changes made and known external factors

Structure for Findings & Recommended Actions



The Key Slide in your Presentation



Recommendations Summary

Website Area	Visits	Key Metric	Current Performance	Target Increase	Target Business Impact
Organic Search Traffic to Money Pages				500%	£50,000
Paid Search Traffic Quality				50%	£100,000
Paid Search Landing Pages				20%	£10,000
Contact Form Design				50%	£20,000
Calls to Action on Money & Consideration pages				25%	£25,000
Blog Post Page Design				90%	£75,000



End Result of Your Analysis

- The company implements your recommendations
- As a result, they make a lot more money
- As a thank you, they give you a lot of this money
- *Caveat: these last three stages are very difficult to achieve...*



Questions

Thank you for your time today



To get in touch, please contact me at:

Email: peter.oneill@zhsorchards.com

Twitter: [@peter_oneill](https://twitter.com/peter_oneill)

LinkedIn: www.linkedin.com/in/peteroneill

Website: www.zhsorchards.com